

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF NEW YORK

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UNITED STATES OF AMERICA,	:	15-CR-00088(SJ)
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	:	
-against-	:	United States Courthouse
	:	Brooklyn, New York
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	:	
ADAMOU DJIBO,	:	Thursday, September 3, 2015
	:	9:30 a.m.
	:	
Defendant.	:	
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TRANSCRIPT OF CRIMINAL CAUSE FOR HEARING
BEFORE THE HONORABLE STERLING JOHNSON, JR.
UNITED STATES SENIOR DISTRICT JUDGE

A P P E A R A N C E S:

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1 (In open court.)

2 (Judge STERLING JOHNSON, JR. is in the courtroom.)

3 THE COURTROOM DEPUTY: U.S. versus Djibo.

4 THE COURT: We have your guy on the stand?

5 MS. KONIUSZY: Yes. Last time we were here, one
6 month ago for the second appearance, the defense expert
7 testified. His direct exam lasted approximately ten minutes
8 and defense counsel was unprepared to cross him at that time,
9 asked for Your Honor to give him another opportunity to come
10 back, said he needed time to consult with his own witnesses,
11 and we scheduled today's date specifically for the purposes of
12 giving him an opportunity to prepare cross and also today was
13 the date that he was told to bring any witnesses that he had.
14 They were supposed to testify today.

15 This is our third appearance on this suppression
16 hearing. This has been going since early July.

17 THE COURT: I am aware. I have been here.

18 MS. KONIUSZY: Thank you.

19 THE COURT: Put your guy on the stand.

20 MS. KONIUSZY: The Government calls Special Agent
21 David Bauer, B-A-U-E-R.

22 THE COURT: You are still under oath, you remember
23 that?

24 THE WITNESS: Yes.

25 MR. MARGULIS-OHNUMA: May I inquire?

1 THE COURT: You may.

2 CROSS EXAMINATION

3 BY MR. MARGULIS-OHNUMA:

4 Q Have you and I ever spoken before?

5 A We have not.

6 Q You are -- testified last time that you were an expert
7 in, I think the field was forensic computers?

8 THE COURT: No, he did not testify as an expert. I
9 qualified him as an expert.

10 MR. MARGULIS-OHNUMA: Forgive me, Your Honor.

11 Q Let me ask you a little bit about your qualifications as
12 a forensic computer examiner. Am I saying that right?

13 A Sure.

14 Q You do not have any certifications in that field; is that
15 correct?

16 A That's not.

17 Q What certifications do you have, sir?

18 A I believe I mentioned on the resume that I provided. I
19 don't keep them all current, although I've had an IACIS
20 certification, which is a certification offered by one of the
21 vendors that manufactures one of the suites we use, very
22 commonly used.

23 I've also held A plus certification in the past and
24 still do, which is computer hardware-software. Number other
25 ones I'm trying to think of. BlackBag Technologies is a

1 company that offers certification in a product called
2 BlackLight, which is something we commonly use with Apple
3 devices.

4 Q Sir, am I correct that those are all certifications on
5 particular software or hardware devices; right?

6 A So far that I've mentioned, yes.

7 Q And those are offered by the manufacturers of those
8 devices; correct?

9 A With the exception of the A plus certification. There
10 are others that I am trying to --

11 THE COURT: You talk too fast.

12 THE WITNESS: Okay.

13 Q The A plus certification you ask guy in July of 2003;
14 correct?

15 A That's correct.

16 Q Have you renewed that since?

17 A That is actually a permanent certification or at least it
18 was at that time.

19 Q But it's based on the information technology as of that
20 time in 2003; correct?

21 A Actually, let me correct myself. As part of the program
22 that I went through in my general forensic training, that
23 certification is a particular requirement. So although I was
24 not required to test for it, because I had already gotten the
25 certification, I actually went through the training again also

1 in 2012.

2 Q Okay. And that is generally on computer hardware and
3 software; correct?

4 A That's correct.

5 Q Now aside from that, would you agree with me that the
6 leading certification in this field is offered by, not by a
7 manufacturer, but by the International Society of Forensic
8 Computer Examiners?

9 A There are actually a quite a number of credentials out
10 there so I would not agree to any one in particular. I think
11 they all offer some benefit, but, no, I would not.

12 Q But you don't have any -- you haven't been recently
13 certified in any general certification as opposed to one that
14 is for a particular platform; correct?

15 A Actually, just in July I went through a program which is
16 called advanced computer evidence recovery training. It was
17 offered at the Federal Law Enforcement Training Center.

18 THE COURT: In Glynco?

19 THE WITNESS: Exactly.

20 A And that is a program offered about once a year to us, so
21 that covers a pretty broad base of topics.

22 Q And that's training but that's not a certification;
23 correct?

24 A That's correct, although there are some practicals
25 involved, which are pass/fail.

1 Q And, in fact, with respect to the BlackLight
2 certification you mentioned, there's actually two levels of
3 BlackLight certification that are available; am I correct
4 about that?

5 A The only one that I am aware of is the CBE certification
6 which is Certified BlackLight Examiner.

7 Q Right. Let me hand you, I'll mark it for identification
8 as Defendant's Exhibit B, and see if that refreshes your
9 recollection at all.

10 THE COURT: Sustained. Did not say recollection
11 needed refreshing.

12 MR. MARGULIS-OHNUMA: Okay.

13 Q Is there anything -- withdrawn.

14 As an expert in the field of forensic analysis, you
15 keep up to date generally on what certifications are
16 available; correct?

17 A I do.

18 Q Okay. So is there anything that might help reflect your
19 recollection as to the two different certifications that
20 BlackBag Technologies offers?

21 A No, not particularly.

22 MR. MARGULIS-OHNUMA: Your Honor, I do not, because
23 of the situation with our expert, I'm not sure I am going to
24 have my own witness to offer this. I would like to show it to
25 him and ask him if it is the sort of thing that he, as on

1 expert in the field, relies on. It is, and I will proffer
2 from the BlackBag Technologies's website and reveal that
3 there's two different certifications, one for certified
4 BlackLight examiner and one specific to IOS certified
5 forensic --

6 MS. KONIUSZY: I object to this.

7 THE COURT: I am going sustain and you are
8 testifying yourself.

9 MR. MARGULIS-OHNUMA: Sorry. I didn't understand
10 what the objection was to.

11 THE COURT: You are testifying. You were not asking
12 a question. You have to ask a question of the witness.

13 MR. MARGULIS-OHNUMA: Right. I would like to ask
14 permission to show him the BlackBag Technologies's website and
15 see if he can comment on it.

16 THE COURT: Comment on it? Go ahead, show it to
17 him.

18 MR. MARGULIS-OHNUMA: That's marked for
19 identification as Defense Exhibit B.

20 MS. KONIUSZY: We never received copies of any of
21 this in advance. I don't know what this is. We would like a
22 copy of our own Exhibit --

23 THE COURT: He is showing it to you. It is not in
24 evidence.

25 (Pause in the proceedings.)

1 A Thank you. Okay.

2 Q Sir, after looking at Defense Exhibit B, does that in any
3 way help you understand that there's also a more particular,
4 more advanced, certification for BlackLight on IOS-specific
5 devices?

6 A Let me just look again, if you would.

7 I can see that there are two certifications offered,
8 yes. I have the former and not the latter. I'm not sure how
9 it's relevant to this particular matter because this software
10 wasn't used in this particular case, but there are a lot of
11 manufacturers that offer a lot of different certifications and
12 while --

13 THE COURT: We have a court reporter here, have
14 mercy.

15 THE WITNESS: Okay. Sorry about that.

16 A There are a lot manufacturers that offer a lot of
17 different certifications and while I keep tabs on most of
18 them, or as many as them as possible, I certainly am not aware
19 of them all.

20 Q Is the reason for that because you're more of a
21 generalist, you don't -- your expertise is not specific to
22 IOS, like that particular certification is; is that right?

23 A I wouldn't say that I'm a specialist in any one area, so
24 that's a fair question, sure.

25 Q So, let's talk about what you relied on and reviewed in

1 preparing for your testimony in this proceeding.

2 What can you -- can you just go over with us, what
3 did you look at to prepare for this?

4 A I consulted with other examiners that have some
5 experience with the particular device in question. I read a
6 technical --

7 Q Let me stop you there. Experience with which device?

8 A Well, I believe the device in question here is the IP-BOX
9 that was referenced in my earlier testimony.

10 Q So was it -- was your testimony actually based on --
11 withdrawn.

12 Did you have any experience yourself with IP-BOX
13 prior to preparing for this proceeding?

14 A I did.

15 Q What else did you rely on?

16 THE COURT: Just a second. How many versions of the
17 IP-BOX are there?

18 THE WITNESS: Well, it's actually a piece of
19 hardware and there are different versions of software that you
20 can update the hardware with. To my knowledge, there's three
21 different versions and they built on the previous one.

22 THE COURT: Okay.

23 Q What else did you look at or what else did you do to
24 prepare?

25 A I believe I mentioned consultation with other examiners.

1 There is a single technical paper out there that I am aware
2 of, which I have also read, and I've also done some my own
3 testing.

4 Q What's that single technical paper?

5 A I don't recall the exact title off the top of my head,
6 but it's something to effect of IP-BOX breaking simple pass
7 codes on IOS devices.

8 THE COURT: Just a second.

9 The phone that you worked on, what was the operating
10 system for that phone, do you know?

11 THE WITNESS: I do. All Apple iPhones use what they
12 call IOS.

13 THE COURT: What is the version of the IOS?

14 THE WITNESS: It was 8.1.2.

15 THE COURT: 8.1.2, okay.

16 MR. MARGULIS-OHNUMA: Your Honor, I'll get right to
17 it. Obviously you're ahead me.

18 Q And according to the published literature, IP-BOX
19 requires an adapter to work with anything higher than 8.0.0;
20 correct?

21 A Actually, I believe it's 8.1.1, but there is an adapter;
22 that's correct.

23 Q Right. And according to the published literature, it
24 actually does not, is not compatible with 8.1.2; isn't that a
25 fact?

1 A Actually, no, that is not a fact. The published
2 literature, and again the only document that I see available,
3 says that it should, in fact, work.

4 Q And that's a document by a police officer -- withdrawn.

5 Can you produce that? Do you have that?

6 A I don't have it with me, but I can certainly produce it
7 for you.

8 MR. MARGULIS-OHNUMA: I would ask for production of
9 that since he relied on it for his opinion.

10 Q You said you did testing of your own; right?

11 A I have.

12 Q And did you test on Mr. Djibo's iPhone?

13 A I did not.

14 Q So, you don't know whether it would actually work on
15 Mr. Djibo's iPhone or not, because you didn't test it; right?

16 A Well, actually, I would not have had the opportunity to
17 test it on his iPhone because, as it was presented to me, it
18 is already unlocked. That is first.

19 Secondly --

20 Q Wait. Can I stop you right there? Let's break that down
21 a little bit.

22 When you say it was unlocked, you mean the pass code
23 had been removed by somebody?

24 A I believe that's the case, yes.

25 Q Do you know who removed the pass code?

1 A I don't.

2 Q But you have the pass code for Mr. Djibo's iPhone; right?

3 A Yes. Either it was given to me, or it was presented in
4 an unlocked form. But either way, I wouldn't modify the phone
5 in order to test it. I wouldn't change the pass code and
6 modify evidence. So that was really the other reason I was
7 getting to.

8 Q But you are saying somebody did before you got the phone,
9 somebody modified it to remove that pass code, so it was
10 unlocked when you got it. Is that what --

11 A I understand it --

12 MS. KONIUSZY: Objection.

13 THE COURT: What is the objection?

14 MS. KONIUSZY: It's a compound question.

15 THE COURT: Did you understand the question?

16 THE WITNESS: I did.

17 THE COURT: Overruled.

18 A I'm saying that it was either unlocked when presented to
19 me, or I was presented the phone with the pass code. In
20 either case, I could access the contents of the phone.

21 Q Okay. You just don't remember either way?

22 A Correct.

23 Q Okay. So, there's nothing about that that would in any
24 way have prevented from you testing IP-BOX on that phone;
25 right?

1 A Well, you wouldn't do that because, for me to do that,
2 for me to test the phone, I would have to re-enable the
3 security settings in the device that would require a pass
4 code, which would modify the contents of that device.

5 You just wouldn't do that. That's just not
6 forensically sound.

7 Q Okay. But you don't remember if that was the situation;
8 right?

9 A What I'm saying is, I wouldn't have tested it either way
10 in that fashion.

11 Q I'm going to ask you -- I am going to have to strike that
12 answer and ask you not to speculate as to what happened. I
13 want to just know what you remember or don't remember.

14 Okay. So if you can just let us know if you don't
15 remember, can you do that?

16 A I'm sorry. I don't understand the question.

17 Q All right. You don't -- what I think you testified to,
18 tell me if this is correct, is that you don't remember whether
19 it came to you unlocked with the pass code removed --

20 THE COURT: Asked and answered. Asked and answered.

21 MR. MARGULIS-OHNUMA: Okay.

22 Q Again, I'm trying to understand why you didn't test the
23 phone. It had nothing to do with whether or not it was
24 unlocked; correct?

25 A May I explain?

1 Q Sure.

2 A Okay. You would not modify a person's phone in any way,
3 which you would be doing if you were to re-enable the pass
4 code on the phone. I wouldn't make changes to a user's
5 device, because if I were to do that, I would be modifying
6 evidence. I am not willing to do that.

7 As far as testing a phone in that particular
8 configuration, you are correct, that I can't do that simple
9 because I don't have an exemplar phone, i.e, a nonevidentiary
10 device that is an iPhone 5 running that particular version of
11 the software.

12 What I can tell you are two things: One, I have
13 spoken with other examiners who have actually broken pass
14 codes on phones that have operating systems that are more
15 recent than this particular version that we are talking about
16 in your client's phone. Those versions would arguably be more
17 secure and more difficult to break into. So I have that.

18 The other thing is, there's actually some new
19 information that's been released since my last testimony that
20 would have also provided another option to get into this
21 phone, which we just found out about recently.

22 Q Okay. Sorry, there was a lot there and I want to try to
23 break it down.

24 A Sure.

25 Q So if I understood your answer, Agent Bauer, directly at

1 the beginning I think you said that you wouldn't have done the
2 testing because that could have somehow affected the evidence,
3 it could have spoliated the evidence; is that correct?

4 A I would not have done the testing on this particular
5 phone; that's correct.

6 Q Because that phone cause evidentiary; right?

7 A Correct.

8 Q And then you said that you spoke to others who have
9 successively broken into other iPhones; is that correct?

10 A That's correct.

11 Q Who are those people you spoke to?

12 A I don't recall the names offhand, but they are other
13 examiners like myself.

14 Q Okay. And did they demonstrate -- withdrawn.

15 Did they say that they had used IP-BOX to do that?

16 A Yeah, I can recall specifically that one was able to
17 access a device running version 8.1.3. I believe that was on
18 an iPhone 4s.

19 Also, another that was able to access a phone
20 running the current version 8.4, or the current major version,
21 at least.

22 Q So, the first person you spoke to, you can't remember
23 that person's name?

24 A No, I do not, not offhand.

25 Q Was that a Government employee?

1 A Not a Federal Government employee. It was a local law
2 enforcement person.

3 Q And did they show you that or how did you --

4 A No, this was not a local person.

5 Q Was that person a certified forensic examiner?

6 A I don't know. They were in a computer forensics division
7 of some sort, but I don't have their exact credentials.

8 Q And -- sorry.

9 As an expert in the field, do you typically rely --
10 withdrawn.

11 And then someone else told that you they used --
12 sorry -- that they were able to break into 8.4; is that right?

13 A That's correct.

14 Q And what kind phone was that on?

15 A That was on an iPhone 5s, I believe.

16 Q That's a more advanced phone than the iPhone 5 here;
17 right?

18 A Correct.

19 Q And the first one you said was actually less advanced
20 hardware than the 5, right, 4s?

21 A The 4s precedes the 5; that's correct.

22 Q So in both cases they are different configurations from
23 the phone here; right?

24 A Well, yes, that's correct. And you will find --

25 Q You've answered the question.

1 A Okay.

2 Q So, with the second person, what was that person's name?

3 A I don't have names offhand, I'm sorry.

4 Q Was that person a U.S. Government employee?

5 A Not Federal Government, no. I believe this person worked
6 for a prosecutor's office. Actually, I know they did.

7 Q Which office was that?

8 A Local, I believe, Bergen County.

9 Q New Jersey?

10 A Correct.

11 Q Now, have you yourself ever broken into a phone with
12 IP-BOX?

13 A I have.

14 Q What version was that phone running?

15 A I believe an iPhone 4s running 7.0.something. I'm not
16 sure the exact version. It clearly works on IOS 7 devices.

17 Q In preparing for today's testimony, did you look around a
18 little for websites regarding IP-BOX?

19 A Sure.

20 Q And did you see any website by the manufacturer of
21 IP-BOX?

22 A It's not a company that makes the box, so, no.

23 Q Well, if it's not a company, who makes the box?

24 A It's actually made in China by a single individual. It's
25 not a forensic tool.

1 Q What do you mean it's not a forensic tool?

2 A I mean it's not designed with forensic purposes in mind.
3 It's, probably my best description of it, honestly, would be
4 that it's a hacking tool.

5 Q And, in fact, it sends some of the data back and forth to
6 China that it obtains; right?

7 A I can't answer that question.

8 Q In order to use it, let's just go through a little bit
9 about how to use it.

10 You have to take the iPhone and pull off the screen;
11 right?

12 A That's not correct, no.

13 Q How do you use the version you are familiar with?

14 A Well, there's a couple different ways you can use it, but
15 basically the way the device works is it connects to the
16 phone, and as I think I described earlier, it attempts
17 guesses --

18 Q Let me step you through it.

19 MS. KONIUSZY: Objection.

20 THE COURT: Sustained. You ask him a question then
21 you interrupt him. Sustained.

22 A Okay. So, the device queries the phone with different
23 numbers using a simple pass code, i.e., 0000 through 9999, and
24 what will happen when you successfully enter the pass code on
25 most iPhones is that you will get a change in the color, or

1 rather the light. The screen contrast will change and you
2 actually are affixing a small light sensor to the surface of
3 that phone, not taking the screen off. You're simply affixing
4 the sensor to the surface of the phone.

5 When correct the guess is made, the sensor detects
6 the change in light, and basically, that's where the system
7 stops and the correct pass code is recorded.

8 Q Now, let's go back to the iPhone itself and how it works.
9 Every time you enter a pass code incorrectly, something
10 changes on the phone itself; correct?

11 A Ah --

12 Q It's a yes or no answer. I'll try step you through
13 quickly.

14 A The phone will flicker a bit. In some versions basically
15 the numbers will shake slightly to let you know you've guessed
16 incorrectly.

17 Q Right. But the phone itself records the incorrect guess;
18 correct?

19 A In some cases, yes, and in some, no.

20 Q Okay. On the iPhone -- on an iPhone 5 running 8.1.2, the
21 to be records the guess as the security password; correct?

22 A That's correct.

23 Q So, I'm only going to talk about 8.1.2 on an iPhone 5; is
24 that okay?

25 A Sure.

1 Q So, on that particular device, every time you guess, it
2 records the guess and it then increases the length of time
3 before it will respond to the next guess as a security
4 measure; is that correct?

5 A Somewhat, but it's not quite correct.

6 Q Tell me what's not correct.

7 A Basically, you're allowed five guesses, beginning with
8 8.1.1. Need to tell you.

9 From that point forward, you're correct in that
10 there's a time penalty that begins to be assessed. It will
11 lock you out for a temporary period.

12 As you continue up the ladder with the number of
13 incorrect guesses, that time penalty will increase and
14 eventually you get to the point where you can be essentially
15 locked out, although it's not a permanent thing. So I think
16 that's what you're referring to?

17 Q Yes. It's not a permanent thing, but I think you told us
18 in your direct testimony you can be locked out for 43 years?

19 A There is a phone on my desk that has that situation or
20 something similar; correct.

21 Q There's also a setting that the user can set where it
22 automatically wipes the phone after ten incorrect guesses;
23 correct?

24 A That's correct.

25 Q And the purpose, the point of IP-BOX is to get around

1 that system you just described; isn't that right?

2 A It gets around one of them.

3 Q How is that? Explain that to me.

4 A Actually, I should probably correct that.

5 The adapter you mentioned, and I'm talking now
6 specifically about the temporarily getting locked out thing we
7 just discussed, the adapter will basically connect to the
8 phone and reboot the phone after a certain number of tries,
9 essentially wiping the slate clean, so to speak. So, that
10 that process can continue without the time penalty being
11 assessed.

12 Q All right. And the adapter I mentioned does that by
13 killing the power to the battery prior to it writing the
14 information to the flash memory, which is static; is that
15 correct?

16 A Essentially that's correct.

17 Q Let me break that down. It's a little confusing.

18 The iPhone has system memory and flash memory.
19 Those are two different things; correct?

20 A All of the memory on the iPhone is flash memory, to my
21 knowledge, but there are different partitions of memory;
22 that's correct.

23 Q Which processor does this phone run?

24 A I don't know offhand.

25 Q Okay. Well, it's the A7 or the A8, I think; isn't that

1 right?

2 A I don't know offhand.

3 Q That processor itself has its own internal memory;
4 correct?

5 A Yes.

6 Q Okay. And when you put in an incorrect password, the
7 fact that you did that is written to the processor's memory,
8 starting in 8.11; is that correct?

9 A That's correct.

10 Q And in that way the device you're talking about can't
11 defeat that unless it somehow cuts the power, because the
12 phone remembers that you have put in that number of password
13 attempts; isn't that correct?

14 A I'm not quite sure I understand the question. Could you
15 repeat that, please?

16 Q Yeah.

17 In order for IP-B0X to work it has to interrupt --
18 I'm not repeating it. I'm trying to rephrase.

19 A That's fine.

20 Q In order for IP-B0X to work, it has to interrupt the
21 phone's automatic writing of the fact that you entered an
22 incorrect password; isn't that correct?

23 A I didn't design the box. I do know that the adapter has
24 to physically be attached to the phone with the cover off. So
25 you're basically connecting it directly to the battery, and

1 the reason for that is because it is cutting power, and
2 rebooting the phone essentially wiping that slate clean, as I
3 just described.

4 So, that's the reason that it's able to circumvent
5 the penalty you begin to incur after five wrong guesses.

6 Q So, for this particular phone, you do need to take the
7 cover off to use that adapter, don't you?

8 A Correct.

9 Q And by the cover, you mean the actual screen; right?

10 A No. I mean the back cover.

11 Q But that separates the back from the screen, does it not?

12 A Actually, the back cover comes off quite easily on
13 iPhones. You remove two screws, slide it off, you have direct
14 access to the battery. The screen remains intact.

15 Q Okay. But, so you would have had to open it up in order
16 to attach the adapter; right?

17 A Yes.

18 Q And in opening it up, there is some risk, is there not,
19 of damaging the hardware?

20 A I've never opened a phone and damaged it, but I'm sure
21 you could incur some form of risk in anything you do.

22 Q Have you used the IP-BOX with this particular adapter
23 we've been talking about?

24 A I have not. And again, that's because I don't have a
25 device that I can test it on.

1 Q And you would agree that the IP-B0X, without the adapter,
2 wouldn't work for this phone higher than IOS 8; correct?

3 A Actually, I haven't verified this independently, but no,
4 I would not, because again, in my discussion with other
5 examiners, I have actually, specifically the one I mentioned
6 that was able to bypass version 8.4, this person apparently
7 got into a phone running 8.4 without the adapter.

8 This is not an exact science.

9 Q But you don't remember that person's name; right?

10 A Offhand, I don't.

11 Q Now, what is the, if not the manufacturer, what are the
12 seller's claim when they sell the adapter?

13 THE COURT: Where are we going with this line of
14 questioning?

15 MR. MARGULIS-OHNUMA: Whether it was compatible with
16 8.1.2, with this phone or not.

17 I realize he just said based on some discussions in
18 his community that he thinks it is, but, I mean, I have a
19 website right here that says it's not. And I have an expert
20 prepared to testify it's not.

21 So I want to ask him about that and see if maybe he
22 can harmonize it.

23 THE COURT: Well, you have an expert who says that
24 it is and you have a piece of paper that says it is not.

25 MR. MARGULIS-OHNUMA: Right. I'd like to confront

1 him with the piece of paper.

2 THE COURT: You have already done that.

3 MR. MARGULIS-OHNUMA: This is a different piece of
4 paper.

5 THE COURT: Let's wind it up.

6 MR. MARGULIS-OHNUMA: I have nothing further except
7 to confront him with this, Your Honor.

8 THE COURT: Have you confronted him with it?

9 MR. MARGULIS-OHNUMA: No, I have not.

10 THE COURT: Confront him then.

11 MR. MARGULIS-OHNUMA: I'll give a copy to the
12 Government, just so I'm ready.

13 So I've marked as Defendant's Exhibit A for
14 identification a printout of a website entitled GSM Server
15 that purports to sell IP-BOX adapter for IOS 8.

16 BY MR. MARGULIS-OHNUMA:

17 Q You want to take a look at that, sir?

18 A Sure. Yes, I have seen it.

19 Q And so you are familiar with this one?

20 A I am.

21 Q Okay. And would you agree with me -- actually, is this
22 -- these claims by sellers are the kind of thing that you rely
23 on to form your opinion; isn't it?

24 A No, not necessarily.

25 Q You don't rely on claims by sellers?

1 A I would certainly consider them, but I don't rely on
2 them. To the best of my ability, I do my own testing.
3 Obviously, I am limited in that ability here.

4 I'm aware that this paper you're presenting me with
5 says that it's supported in certain versions and not in
6 others.

7 I am also aware that only company that I'm aware of
8 that sells the adapter --

9 THE COURT: Just a second. Have you marked that as
10 an exhibit?

11 MR. MARGULIS-OHNUMA: Yes, Defendant's Exhibit A.
12 Since he's familiar with it, I would like to move it into
13 evidence, Your Honor.

14 THE COURT: And just Defendant's Exhibit A?

15 MR. MARGULIS-OHNUMA: Correct. I'll give a copy to
16 the Court.

17 THE COURT: Have you seen it, Counsel?

18 MS. KONIUSZY: We're just looking at it now.

19 MR. MARGULIS-OHNUMA: Sorry, did the Court have a
20 question?

21 THE COURT: No, I am waiting for an objection.

22 Do you have any objection to it?

23 MS. KONIUSZY: Yes, Your Honor. We don't have a
24 problem with him questioning the witness on it, but we object
25 to moving it into evidence. This isn't even a complete

1 document. It's only a fragment of the print-off. It
2 certainly doesn't encapsulate the full website. Even the page
3 that --

4 THE COURT: Sustained.

5 MS. KONIUSZY: Thank you.

6 BY MR. MARGULIS-OHNUMA:

7 Q Is this one of the -- this is one of the things that you
8 reviewed; correct, sir?

9 A In some form, yes. I've seen this in different areas,
10 but yes, that's correct.

11 Q And when you say this advertisement for the device is
12 very specific that it is not compatible with anything higher
13 than 8.1.0; correct?

14 A I understand -- excuse me.

15 That's correct that that's what it said here, yes.

16 Q Okay. And the phone that you examined that you claim you
17 could have gotten to, was higher than 8.1.1; correct?

18 A Yes.

19 MR. MARGULIS-OHNUMA: Nothing further for this
20 witness, Judge.

21 THE COURT: Any redirect?

22 MS. KONIUSZY: Very briefly, Your Honor.

23 REDIRECT EXAMINATION

24 BY MS. KONIUSZY:

25 Q Special Agent Bauer, I believe on cross you were asked

1 what the basis was for your conclusions, and you had started
2 to name a number different sources that you had consulted.

3 Do you recall that?

4 A Yes.

5 Q I think you got cut off before you finished.

6 In addition to the consultation with other examiners
7 and the paper you mentioned, and your own testing, did you
8 consult with anyone else about the IP-BOX?

9 A I consulted with the author of the only technical paper
10 I'm aware of, which is the one I mentioned.

11 Q And did you consult specifically about the iPhone 5
12 running the IOS 8.1.2 version?

13 A I did.

14 Q And was there anyone else that you discussed the specific
15 capabilities of the IP-BOX with respect to the defendant's
16 specific phone?

17 A Other than the two examiners that I mentioned earlier,
18 no, but those 3 combined, yes.

19 Q And you said you conducted your own testing as well?

20 A I did.

21 Q And that was on an iPhone device; correct?

22 A That's correct. And in terms of real world devices, I've
23 had success with one. I've also done and had some success
24 with other exemplar devices. Again, we are pretty limited by
25 the pool of what we have available. But I've had some varied

1 success in that regard as well.

2 Q And based on the collective results of all of your
3 research and all of your own testing, in your expert opinion
4 would this defendant's iPhone be able to be cracked, using the
5 IP-BOX?

6 A Yes. It could be done and it actually has been done,
7 apparently, from other examiners.

8 I've also seen videos of it being done online,
9 although I'm pretty reluctant to cite YouTube video, I have
10 seen it, and that's about it.

11 MS. KONIUSZY: Thank you.

12 THE WITNESS: Thank you.

13 RECROSS EXAMINATION

14 BY MR. MARGULIS-OHNUMA:

15 Q I think you just testified that you had -- when you were
16 using IP-BOX yourself, you had quote, unquote, varied success
17 with earlier versions of the phone; is that correct?

18 A Yes.

19 Q So sometimes it actually did not work; is that right?

20 A Yes.

21 Q How often did it work and how often did it not work?

22 A I couldn't really give you an exact ratio. I can tell
23 you it's very finicky. For example, the one real world phone
24 that I did, I was attempting to do, and had it fail in the
25 first try. The second try it worked just fine.

1 That's attributable to a number different factors.
2 One, placement of the light sensor seems to make a big
3 difference.

4 The other is, there is a window in which the phone
5 can consider potential correct guesses as the password. And
6 you have to actually set the software of the IP-BOX to time
7 that accordingly. So you're basically taking a best guess at
8 when the open window is.

9 Generally, from my understanding, that time period
10 has been roughly 4500 to 7,000 milliseconds, 4-and-a-half to 7
11 seconds. And you're obviously not going to be completely
12 correct in your guess, but you're fairly accurate.

13 What can happen, as this process continues, is if
14 you're off by a little bit in the beginning and going through
15 10,000 numbers, you'll be off by quite a bit more towards the
16 end. Sort of like a drummer, I guess, would be a good analogy
17 that's off, off beat by a little bit with the band, you know.
18 Maybe not so noticeable at first, but by the end of that
19 process, quite a bit so. And if that happens, it's possible
20 that the box could actually come up with the correct number
21 and yet not realize it, because it's missed the window.

22 Q So, how many real world phones have you actually tested
23 with IP-BOX?

24 A One, as I mentioned.

25 Q And how many test phones have you tested with IP-BOX?

1 A We have two exemplar devices in the lab and I have
2 probably run tests on them five to ten times.

3 Q And were you able, on all three of these, to actually get
4 in with IP-BOX?

5 A Yes.

6 Q But sometimes the device failed; right?

7 A Yes.

8 Q And if it had been -- withdrawn.

9 And none of those exemplars were running 8.1.2;
10 correct?

11 A No.

12 THE COURT: You can step down.

13 THE WITNESS: Thank you.

14 (Witness excused.)

15 THE COURT: You have a witness?

16 MR. MARGULIS-OHNUMA: Your Honor, I do. They're not
17 here. I'd like to be heard at side-bar about that. I did
18 write a letter to the Court about that. I would like to be
19 heard at side-bar about that. It refers to CJA resources.

20 THE COURT: That's what we got off the ECF this
21 morning? Last night you wrote it?

22 MR. MARGULIS-OHNUMA: That's correct.

23 THE COURT: And he's not here. When can he be here?

24 MR. MARGULIS-OHNUMA: I don't know. He was prepared
25 to come today, but was not willing to, because of the CJA

1 issue. Possibly he will be. I could speak to him now.

2 THE COURT: Well, I am not going to wait around for
3 him to come.

4 MR. MARGULIS-OHNUMA: No, I would suggest that --
5 well, we have to resolve the CJA issue first, and if it's
6 resolved, I would suggest that we set it for maybe sometime
7 early next week and hopefully we can get him here.

8 THE COURT: What is a good day next week?

9 MS. KONIUSZY: Your Honor, next week doesn't work
10 for me.

11 THE COURT: Whenever is good for you.

12 MS. KONIUSZY: Could I just check my calendar for
13 one minute, please?

14 THE COURT: Yes.

15 MS. KONIUSZY: We're available any day the week of
16 September 28th.

17 THE COURT: We will be on trial, but let's get a --
18 let's put it down, see how we work it out the 28th.

19 THE COURTROOM DEPUTY: Put it down for that Thursday
20 or Friday, October 1st.

21 THE COURT: Put it on October 1st, Ana.

22 MS. KONIUSZY: Your Honor, I will just note that
23 this is now going to be our fourth appearance.

24 THE COURT: I understand that.

25 MR. MARGULIS-OHNUMA: Your Honor, I'm not available.

1 I have a Second Circuit oral argument that morning. We can do
2 it in the afternoon that day.

3 THE COURT: Let's get another day. I want to do it
4 in the morning and get it over with.

5 The next day?

6 THE COURTROOM DEPUTY: Friday the 7th?

7 MR. MARGULIS-OHNUMA: Yes, that's fine, Judge.

8 THE COURT: Okay.

9 THE COURTROOM DEPUTY: At 9:30.

10 THE COURT: Get a CJA form for him.

11 MR. MARGULIS-OHNUMA: We have one prepared,
12 Your Honor.

13 THE COURT: Okay. Thank you.

14 ALL: Thank you, Your Honor.

15 (Matter concluded.)

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